

37th Annual Meeting, APS Division of Plasma Physics

6-10 November 1995, Louisville, KY

Abstract Submittal Form

Deadline: Friday, 7 July 1995

Subject Classification Category _____
(Refer to the DPP Subject Category list on page M12.)

[] Theory [] Experiment

A supernova-relevant hydrodynamic instability experiment on the Nova laser,* M. Wood-Vasey,¹ B.A. Remington,² J. Kane,³ D. Arnett,³ D. Dearborn,² A. Rubenchik,⁴ S.G. Glendinning,² K.S. Budil,² J. Castor,² S. Woosley,⁵ E.P. Liang,⁶ and R. London,²

¹Harvey Mudd College, ²Lawrence Livermore National Laboratory, ³University of Arizona, ⁴University of California-Davis, ⁵University of California-Santa Cruz, and ⁶Rice University. Hydrodynamic instabilities have recently been highlighted as playing a critical role in the evolution of supernovae (SN). It has long been known, however, that instabilities such as the Rayleigh-Taylor instability and the Richtmyer-Meshkov instability can have a severely debilitating effect on the performance of inertial confinement fusion (ICF) capsules. Consequentially, a two-decade-long research effort into hydrodynamic instabilities has ensued in the field of ICF. We propose to take advantage of this experience in using the Nova Laser at Lawrence Livermore National Laboratory to mount the first experiment to address hydrodynamic instabilities as they occur in SN and their interaction with surrounding matter. The experimental design and initial data will be presented. *Work performed under the auspices of the U.S. Department of Energy by the Lawrence Livermore National Laboratory under contract number W-7405-ENG-48.

[] Prefer Poster Session
[X] Prefer Oral Session
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Submitted by:

(Signature of APS Member)

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A faxed copy is not acceptable. This form, or a computer generated form, plus **TWO COPIES**, must be received by **Friday, 7 July, 1995** at the following address:

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